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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/826,002	04/05/2001	Takeshi Miyashita	0378-0382P	3899

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EXAMINER

LAM, HUNG H

ART UNIT PAPER NUMBER

2615

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/826,002

Applicant(s)

MIYASHITA ET AL.

Examiner

Hung H. Lam

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-13 is/are allowed.
- 6) ☒ Claim(s) 14-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04/05/2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Specification***

1. The amendment of the title is not descriptive. It is suggested that the title is changed to read – An image pickup control device and method capable of reducing dark current ascribable to long exposure --.

### ***Response to Amendment***

2. The amendments, filed on 05/12/2005, have been entered and made of record. Claim 1 is cancelled. Claims 2-20 are pending.

In view of the Applicant's cancellation of claim 1 and amendment of claim 7, claims 2-13 are allowed as they depend directly or indirectly upon the allowed claim 7. The rejection of claim 9 under 35 U.S.C. 112, second paragraph is hereby withdrawn.

### ***Claim Objections***

3. Claims 9 and 12 are objected to because of the following informalities: The Examiner believes that Claim 9 should depend on Claim 8, and "a reference period" should be changed to "said reference period". In Claim 12, "said control signal to said switching circuit" in line 2 should be changed to "said second control signal to said switching circuit". Appropriate correction is required.

*Response to Arguments*

4. Applicant's arguments with respect to claims 14-20 have been considered but are moot in view of the new ground(s) of rejection.

*Claim Rejections - 35 USC § 102*

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu in view of Kimura et al. (US-5,008,757).

Regarding **claim 14**, Shimizu discloses a method of controlling an image sensor (CCD 6) comprising

a photosensitive section for generating signal charges corresponding to light incident to a photosensitive surface, transfer paths for transferring said signal charges (transfer paths are inherent in CCD 6; Col. 4, Ln. 11-19), and

an outputting circuit (Fig. 5, amplifier 62) for detecting said signal charges transferred from said transfer paths and outputting electric signals corresponding to said signal charges for thereby generating an image signal representative of a scene being picked up (Col. 4, Ln. 16-17; Col. 4, Ln. 50-58).

said method comprising the steps of:

driving, if the exposure time is the preselected long exposure time, said image sensor with a low voltage lower than a usual drive voltage (col. 4, lines 56-58); and

driving, when the signal charges generated in said photosensitive section are to be read out, said image sensor with said usual voltage instead of said lower voltage (col. 5, lines 19-26).

Shimizu teaches the method of controlling the noise of the CCD by decreasing the power of the output amplifier when the CCD is exposed for a long time (Col. 7, Ln. 50-55). However, Shimizu fails to disclose the method comprising:

the step of determining an exposure time in accordance with an exposure for shooting a desired scene; and determining whether or not an exposure time of said photosensitive section is a preselected long exposure time.

In the same field of endeavor, Kimura teaches an electronic still camera wherein an auto expose mode comprises the step of selecting the longest shutter time or only half of the longest shutter time corresponding to the on or off state of the sensitivity selecting switch (Fig. 2; Steps 200-202; Col. 3, Ln. 20-37). Kimura further teaches the step of determining whether the shutter time is a defined longest shutter time or if it is greater than the defined shutter time (Fig. 2; Step 205; Col. 3, Ln. 25-30). In light of the teaching from Kimura, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the step of selecting and determining the shutter time as taught by Kimura with the device of Shimizu in order to only reduce the power of the amplifier during the defined longest expose time and thereby reducing the noise and improving the performance of CCD.

Regarding **claim 15**, Shimizu in view of Kimura discloses a method, wherein if the exposure time is the preselected long exposure time (Kimura; Fig. 2; Step 205; Col. 3, Ln. 20-37), said outputting circuit is driven by said low voltage (Shimizu ; col. 4, lines 50-58).

Regarding **claim 16**, Shimizu in view of Kimura discloses a method, wherein if the exposure time is the preselected long exposure time (Kimura; Fig. 2; Step 205; Col. 3, Ln. 20-37), said low voltage is replaced with said usual voltage immediately before said exposure time expires (Shimizu ; col. 5, lines 14-20).

Regarding **claim 17**, Shimizu in view of Kimura discloses a method, wherein if the exposure time is the preselected long exposure time (Kimura; Fig. 2; Step 205; Col. 3, Ln. 20-37), said low voltage is replaced with said usual voltage when said exposure time expires (Shimizu; col. 5, lines 14-20).

Regarding **claims 18 and 19**, Shimizu in view of Kimura discloses the method, wherein the exposure time is determined by automatic exposure control time (Shimizu ; col. 3, lines 32-36; col. 4, lines 37-43), or the exposure time is determined by a manual operation (Shimizu ; col. 3, lines 38-43; Kimura; Col. 3, Ln. 20-24; Col. 3, Ln. 38-40).

Regarding **claim 20**, Shimizu in view of Kimura, discloses a method, wherein low voltage is replaced with said usual voltage after an expiration of the exposure time has been detected (Shimizu ; col. 5, lines 14-20).

*Conclusion*

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung H. Lam whose telephone number is 571-272-7367. The examiner can normally be reached on Monday - Friday 8AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's primary, NGOC YEN VU can be reached on 571-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HL

07/11/05



NGOC-YEN VU  
PRIMARY EXAMINER